

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>				1. CONTRACT ID CODE *****		PAGE OF PAGES 1   1	
2. AMENDMENT/MODIFICATION NO. 0002		3. EFFECTIVE DATE 04 AUG 17		4. REQUISITION/PURCHASE REQ. NO. 64100 /41247645		5. PROJECT NO. (If applicable)	
6. ISSUED BY NSWC CARDEROCK DIVISION 9500 MACARTHUR BLVD. W BETHESDA MD 20817-5700		CODE N00167		7. ADMINISTERED BY (If other than item 6),		CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(X)		9A. AMENDMENT OF SOLICITATION NO.	
				X		N00167 04 Q 0412	
						9B. DATED (SEE ITEM 11) 04 AUG 03	
						10A. MODIFICATION OF CONTRACT/ORDER NO.	
CODE				FACILITY CODE		10B. DATED (SEE ITEM 13)	
<b>11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS</b>							
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14.      The hour and date specified for receipt of Offers <input type="checkbox"/> is extended, <input checked="" type="checkbox"/> is not extended.							
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods. (a) By completing items 8 and 15, and returning <u>0</u> copies of the amendment; (b) By acknowledging receipt of the amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)							
<b>13. THIS ITEM APPLIES ONLY TO MODIFICATION OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.</b>							
(X) A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.							
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103 (b).							
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:							
D. OTHER (Specify type of modification and authority)							
<b>E. IMPORTANT:</b> Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible)							
THE PURPOSE OF THIS AMENDMENT IS AS FOLLOWS. " 1. PROVIDES ANSWERS TO QUESTIONS SUBMITTED BY POTENTIAL OFFERORS PERTAINING TO THE ORIGINAL ROV STATEMENT OF WORK SPECIFICATIONS (SEE PAGES 2 AND 3) " 2. MODIFIES THE ORIGINAL STATEMENT OF WORK SPECIFICATIONS (SEE PAGE 3)							
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, asheretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
(Signature of person authorized to sign)				BY (Signature of Contracting Officer)			

**Answers to questions from potential offerors in response to NSWCCD**  
**Solicitation:N00167-04-Q-0412**

**Physical Configuration:**

1. The vehicle weight, in air, is limited to 100 pounds. Vehicle is neutral in water. This includes the base vehicle only (frame, thrusters, lights, video camera, electronics). This does not include the tether or GFE sensors (DVL, Didson, Mini RovNav, and additional electronics).
2. The vehicle dimensions, (height, length, width), are not specified.
3. Future expansion and upgrade capability is not anticipated.
4. Either brushed or brushless DC motors are acceptable.

**Vehicle Performance:**

1. "Translation and rotation motions in 2.5 knot currents around underwater structures" is a requirement of the vehicle. carrying the GFE sensor payload.
2. Required thrust values apply using bollard pull test.
3. See the Amendment section for an additional clarification.

**Electrical System:**

1. NSWC has a significant investment in computer based navigation and tracking software for the control of small ROVs. The ROV is required to provide auto-heading and auto-depth. The ROV controller must have the ability to receive depth and heading commands through  $\pm 10$  VDC signal or serial communications over an RS-232 or RS-485 link.
2. 120VAC/30 amps is available for the entire vehicle, vehicle-related topside equipment, and GFE sensors and electronics on the vehicle only. GFE sensors and mounts on the vehicle will require less than 100 watts total. Additional GFE topside hardware, including that associated with vehicle mounted sensors, will be powered separately.
3. The GFI shall be UL rated.

**Tether:**

1. Focal or Racal slip-rings are acceptable.
2. Fiber optics may be used in the tether if compatible slip ring is provided..

**Other Supplied Equipment:**

1. The sensor package being installed on the vehicle may preclude having a tilt platform for the video camera. Therefore, it is desirable to have as wide a field of view as possible. It is suggested that this type of camera be integrated into the vehicle in a fixed orientation.
2. Variable zoom and focus functions are not required for the camera.
3. Vehicle lighting must be equivalent to a minimum of 500W of incandescent light.
4. Variable dimming of lights is acceptable.

**GFE Payload:**

1. The Mini RovNav, DVL, and Didson imaging sonar are all Government Furbished Equipment. The bidder is not required to supply these items.
2. The mounting platform(s) for the GFE sensors are also GFE.
3. The total GFE sensor package is expected to be 20-30 lbs. In air and neutrally buoyant in water.
4. The final drawing in the original proposal shows an optional payload camera (also GFE). This is independent of the vendor-supplied main vehicle camera.

**Offer due date and delivery schedule:**

1. The offer due date has been extended to 27 August 2004 per amendment 0001
2. The delivery schedule has not changed.

**Vehicle Spares Questions:**

1. The line stating "An extensive set of topside and vehicle spares must be provided" overrides the statement asking for only vehicle PC boards.
2. A small set of spares is to be provided with the first two vehicles. A complete set of spares for all seven vehicles (including tethers) is to be provided concurrent with delivery of the third through seventh vehicles.
3. No training will be required, though vehicle familiarization should be provided to the initial vehicle recipients (NSWCCD).

**The original Solicitation # N00167-04-Q-0412 specifications are hereby modified as follows**

Under the *ROV Physical Configuration Specifications* section, *Section 12. Camera:* should be changed to read:

- b. Minimum of either 0.2 lux scene or 0.1 lux faceplate sensitivity.
- c. Minimum of 400 horizontal TV lines.
- d. Maximum size – 4" diameter x 9.5" long.
- e. Wide angle lens – minimum of 75 degree horizontal view angle wet.

The *ROV Performance Specification* section should be changed to read:

**1. Minimum thrust values:**

- f. 100 lbs in forward
- g. 30 lbs in vertical